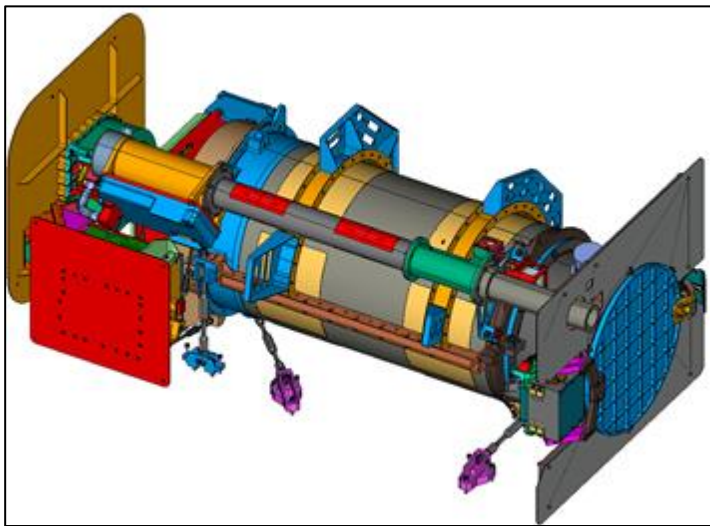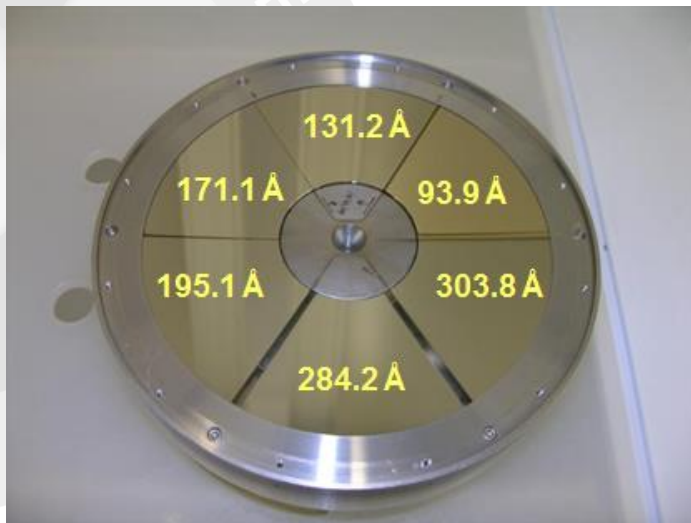# GOES-R SUVI Products

GOES-VW Space Weather Requirements
April 13th, 2015

Instrument Overview

Engineering mock-up of the SUVI design

SUVI Primary Mirror showing segmented regions
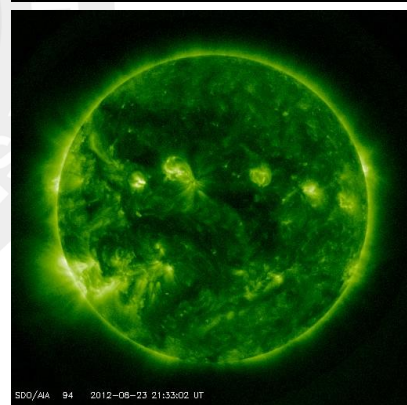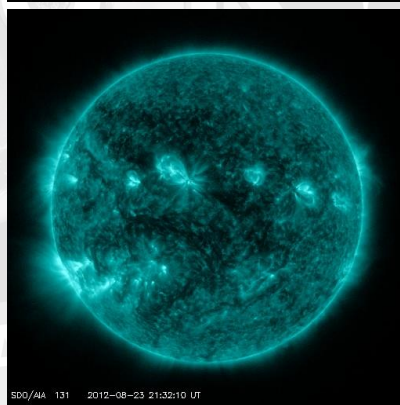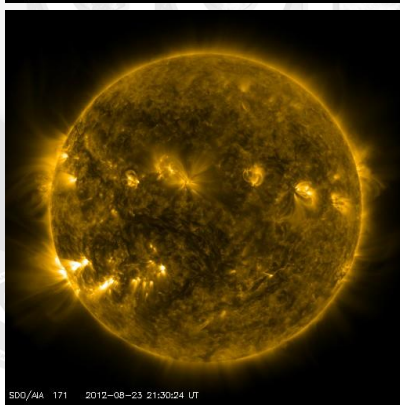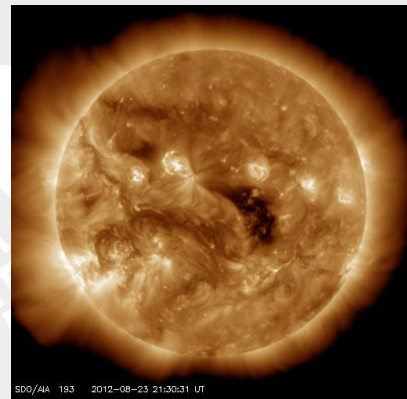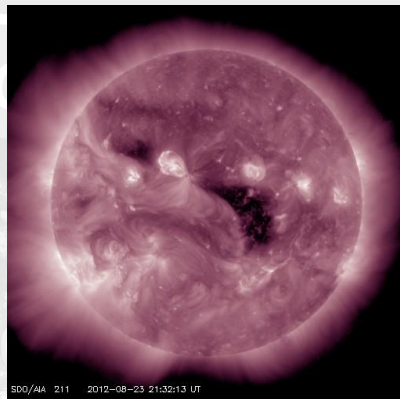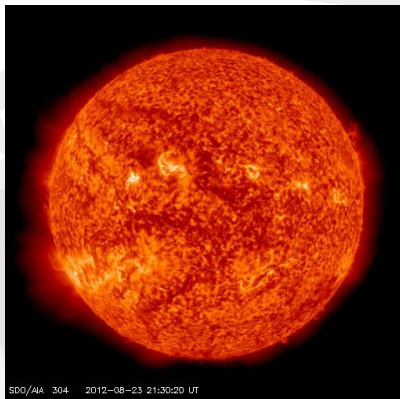
SUVI Level-1b Product

- 1 image/10sec
- 94, 131, 171, 195, 284, 304 angstrom channels
- 1sec or 10msec exposure times

Processing:

- Dark and bias subtracted
- Flatfield correction
- Yaw-flip and amplifier orientation correction
- Coversion to radiance

Processing not done:

- De-grid, alignment of solar north, PSF deconvolution

SUVI Level-2 Product Sets

Product Set 1 (4/16/2015 - 8/31/2015):

- ✦ SUVI Composite Images
- ✦ SUVI Thematic Map

Product Set 2 (9/1/2015 - 3/31/2016):

- ✦ SUVI Coronal Hole Boundaries
- ✦ SUVI Bright Region Data
- ✦ SUVI Flare Location

Product Set 3 (4/1/2016 - 8/31/2016):

- ✦ SUVI Fixed Differences
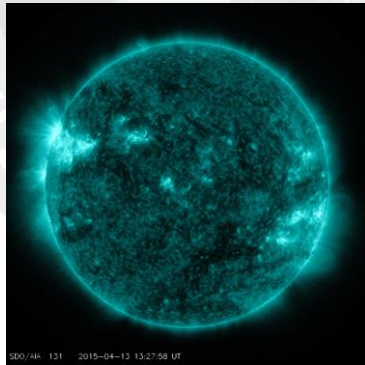- ✦ SUVI Running Differences

SUVI Level 2 products
Composite Image

Composite Images are combined weight-averaged time-series of solar EUV images.

- ✦ Weighting de-emphasizes extreme values and favors values in the instrument response "sweet spot"
- ✦ SUVI has short and long exposure times, both used in the Composite Image to cover the required dynamic range
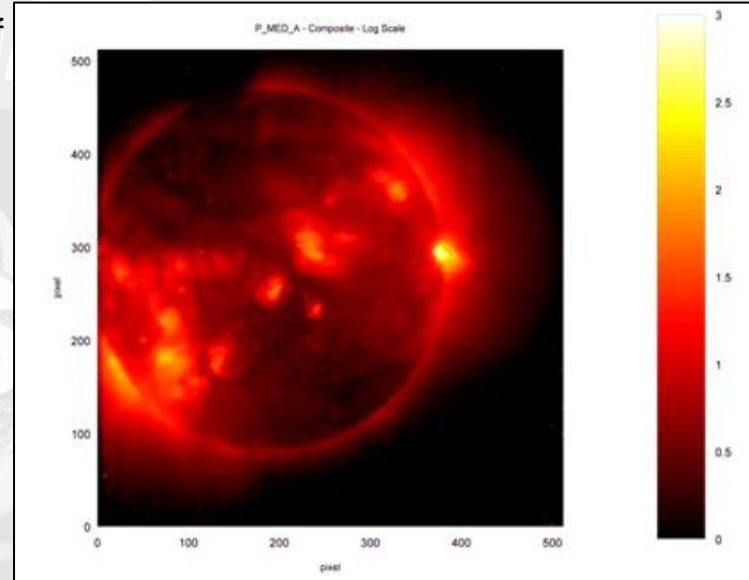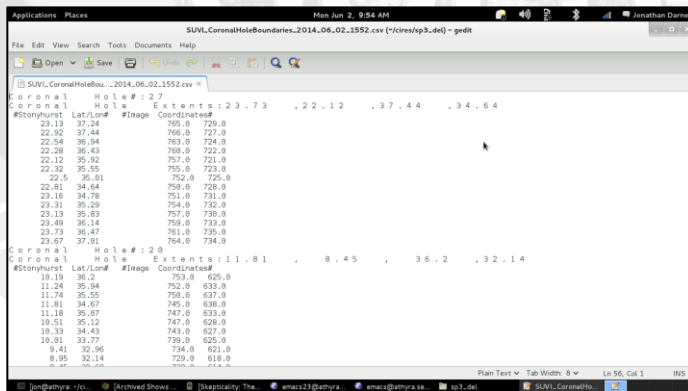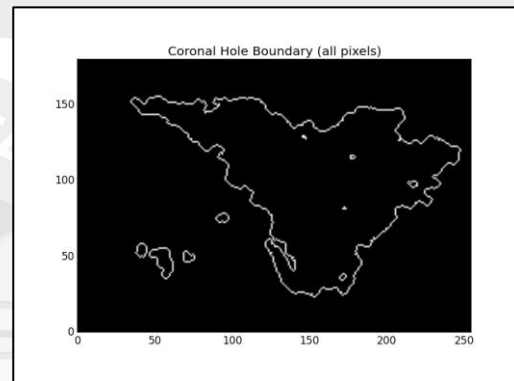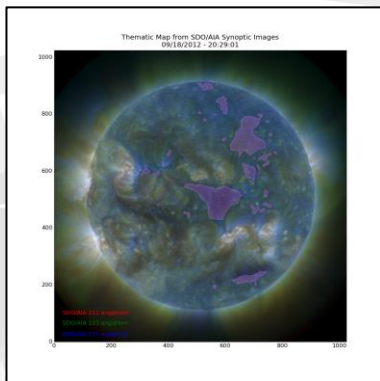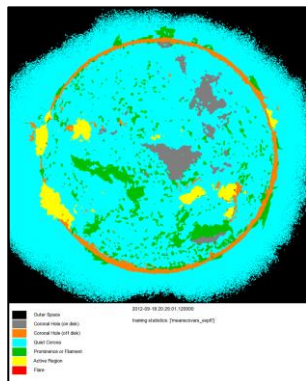
SUVI Level 2 products
Thematic Map

Pixels are classified from probability distributions created from training sets using all six bandpasses.
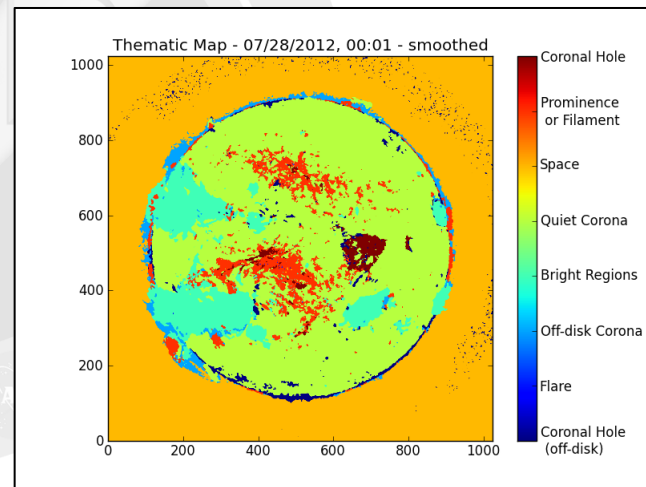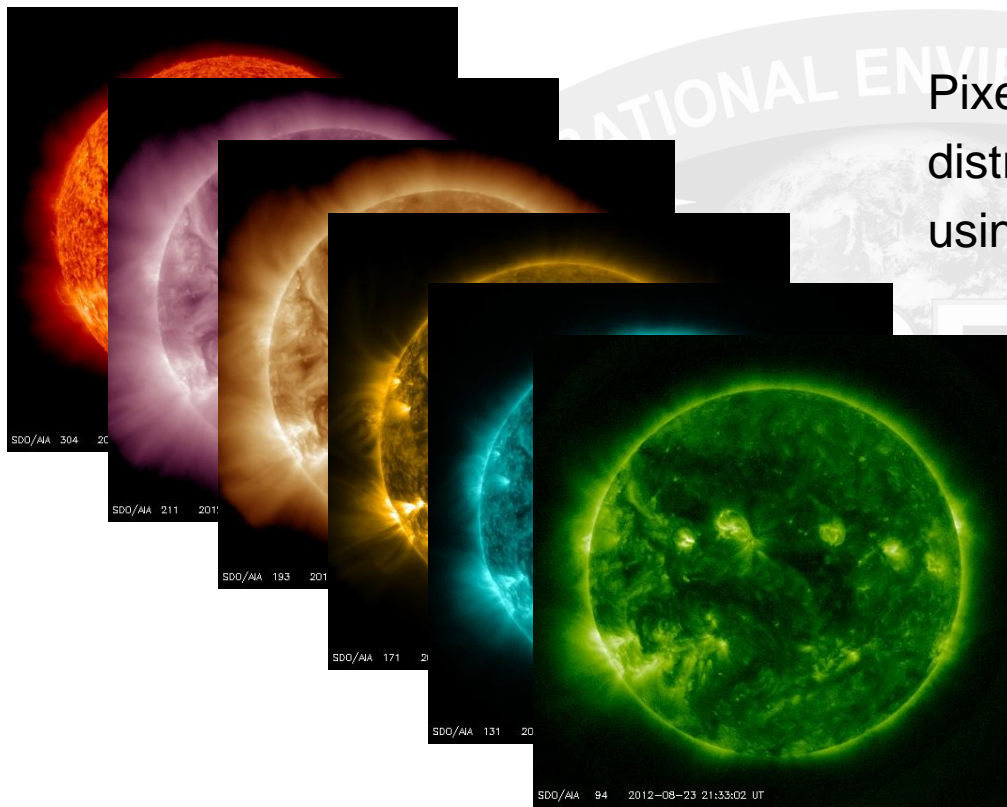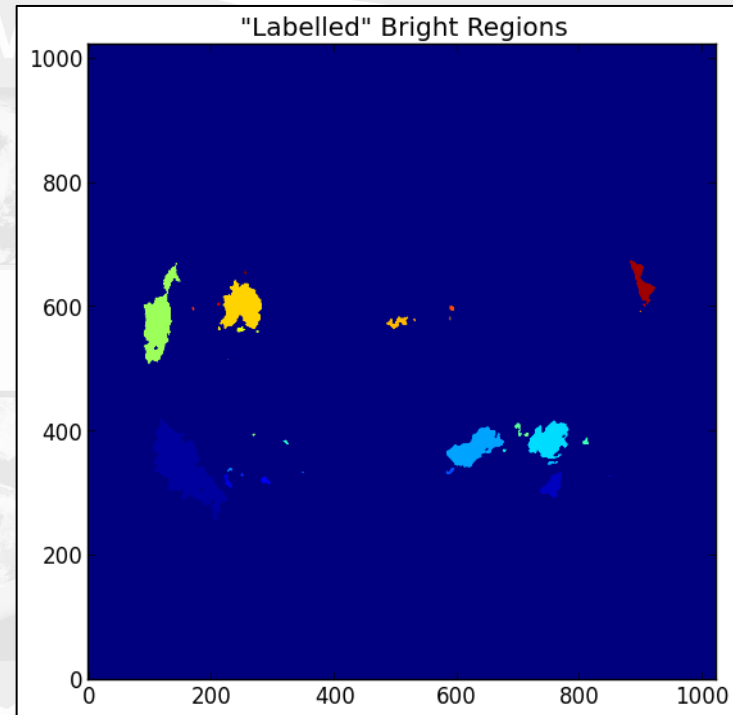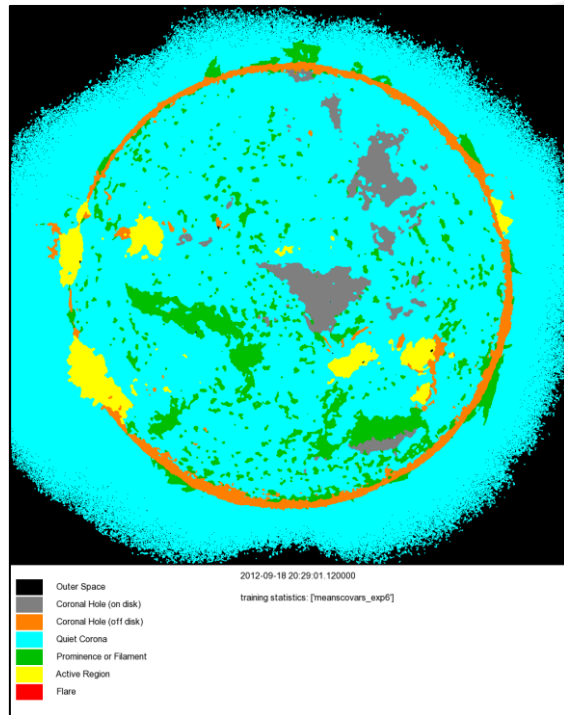
SUVI Level 2 products
## *Coronal Hole Boundaries*

SUVI Level 2 products
Bright Region Data

SUVI Level 2 products

Flare Location

✦ Utilizes an approach similar to the Bright Region algorithm

✦ Uses the Thematic Map as input to identify flaring regions

✦ Determines the location of maximum intensity for each flaring region

✦ Links to the corresponding Bright Region in the Bright Region Report

SDO/AIA   94   2013-04-11 07:47:26 UT
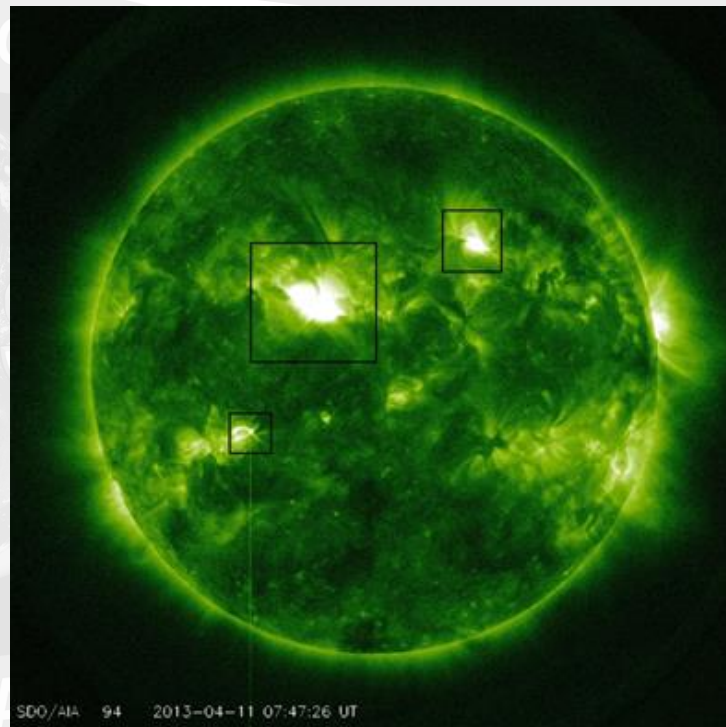
SUVI Level 2 products
Fixed and Running Differences

Fixed Difference

Running Difference